

Complexity metrics for executable business process

ABSTRACT

In this study, seven metrics are proposed for measuring the complexity of Executable Business Processes (EBP). The metrics are either derived from existing business process metrics or adapted from software metrics. Evaluation was carried out in three case studies with the goal of finding out if the metrics are theoretically sound and at the same time intuitional. In case 1, metrics values were computed from three processes and then analyzed to check whether they agree with reality. In case 2, the metrics were grouped into two categories of length and complexity and then separately checked for their conformance to Briand's framework. In case 3, all the metrics were treated under one complexity category and then checked for their conformance to Weyuker's properties. Results indicate that the new metrics are intuitional and are good if used in their respective categories, or when used together to complement each other in order to give a fuller view of process complexity.

Keyword: BPEL; Cognitive complexity; Information flow; Structural complexity; Complexity metrics